

**Montana Board of Oil and Gas Conservation
Environmental Assessment**

Operator: MRC LLC
Well Name/Number: State 13X-12- 2
Location: NW SW Section 12 T37N R4E
County: Liberty, MT; Field (or Wildcat) Whitlash Field

Air Quality

(possible concerns)

Long drilling time: No, 5 to 6 days drilling time.

Unusually deep drilling (high horsepower rig): No, 3100' TD vertical well.

Possible H2S gas production: No, Rierdon Formation test, no H2S anticipated.

In/near Class I air quality area: No, Class I air quality in the area of review.

Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:

☒ Air quality permit (AQB review)

☐ Gas plants/pipelines available for sour gas

☐ Special equipment/procedures requirements

☐ Other:

Comments: No special concerns – using small rig to drill 3100' TD vertical well.

Water Quality

(possible concerns)

Salt/oil based mud: No, freshwater, freshwater mud system

High water table: No high water table anticipated in the area of review.

Surface drainage leads to live water: No, closest water wells are about 1/2 of a mile to the northeast. Depth of these water wells range from 65' to 438'. Water wells are sufficiently distant to not be contaminated. Also, this well will have surface hole drilled to 350' with freshwater and steel surface casing cemented to surface from 350'.

Porous/permeable soils: No, sandy bentonitic soils.

Class I stream drainage: No

Mitigation:

☐ Lined reserve pit

☒ Adequate surface casing

☐ Berms/dykes, re-routed drainage

☐ Closed mud system

☐ Off-site disposal of solids/liquids (in approved facility)

☐ Other:

Comments: 350' of surface casing cemented to surface adequate to protect freshwater zones. Also, fresh water mud systems to be used.

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: No, stream crossings.

High erosion potential: No, small cut, up to 5.6' and small fill, up to 5.8', required.

Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: No, 150'X145' location size required.

Damage to improvements: Slight, surface use is grassland.

Conflict with existing land use/values: Slight

Mitigation

- ☐ Avoid improvements (topographic tolerance)
- ☐ Exception location requested
- ☒ Stockpile topsoil
- ☐ Stream Crossing Permit (other agency review)
- ☒ Reclaim unused part of wellsite if productive
- ☐ Special construction methods to enhance reclamation
- ☐ Other _____

Comments: Access will utilize existing county road, Flat Coulee Road. About 3/8 of a mile of new access road will be built into this location. Cuttings will be buried in the reserve pit. Fluids will be allowed to evaporate and then the pit will be backfilled. No special concerns. Well is immediately north of MCR's yard.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Bingham Ranch is about 3/4 mile to the north northeast and the Shafer Ranch is about 1 1/4 of a mile to the southwest from this location.

Possibility of H2S: None anticipated.

Size of rig/length of drilling time: Small drilling rig/short 5 to 6 days drilling time.

Mitigation:

- ☒ Proper BOP equipment
- ☐ Topographic sound barriers
- ☐ H2S contingency and/or evacuation plan
- ☐ Special equipment/procedures requirements
- ☐ Other: _____

Comments: Annular Preventer, 3,000 psig working pressure. Rule 36.22.1014.

No concerns

Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: None identified.

Creation of new access to wildlife habitat: No

Conflict with game range/refuge management: No

Threatened or endangered Species: Only species listed as threatened or endangered is the Black-Footed Ferret. Species listed as candidate species are the Greater Sage Grouse and the Sprague's Pipit. NH Tracker website lists the following species of concern (4) Sprague's Pipit, Chestnut Collared Longspur, Long-bill Curlew and the McCown's Longspur.

Mitigation:

- ☐ Avoidance (topographic tolerance/exception)
- ☐ Other agency review (DFWP, federal agencies, DSL)
- ☐ Screening/fencing of pits, drillsite
- ☐ Other: _____

Comments: Surface use is a private grassland. There maybe species of concern that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done, if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands.

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites: None identified

Mitigation

☐ avoidance (topographic tolerance, location exception)

☐ other agency review (SHPO, DSL, federal agencies)

☐ Other: _____

Comments: Surface use is a private grassland. There maybe possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. The Board of Oil & Gas has no jurisdiction over private surface lands.

Social/Economic

(possible concerns)

☐ Substantial effect on tax base

☐ Create demand for new governmental services

☐ Population increase or relocation

Comments: Well is a development well in the Whitlash East (State) Swift Sand Unit. No concerns.

Remarks or Special Concerns for this site

Well is 3100' TD, Rierdon Formation vertical well test.

Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected. Some short term impacts will occur.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): Thomas Richmond

(title:) Administrator

Date: August 29, 2013

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website

(Name and Agency)

Liberty County water wells

(subject discussed)

Included with permit application

(date)

US Fish and Wildlife, Region 6 website

(Name and Agency)

ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA
COUNTIES, Liberty County

(subject discussed)

June 25, 2012 (previous well in area)

(date)

Montana Natural Heritage Program Website (FWP)

(Name and Agency)

Heritage State Rank= S1, S2, S3, T37N R4E

(subject discussed)

June 25, 2012(previous well in area)

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____